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(54) **COMPOSITION FOR PREVENTING AND TREATING ACETAMINOPHEN INDUCING HEPATOTOXICITY CONTAINING TNP(N2-(M-TRIFLUOROBENZYL), N6-(P-NITROBENZYL)PURINE) AS AN EFFECTIVE INGREDIENT**

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See application file for complete search history.

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(57) **ABSTRACT**

The present invention relates to a composition for the prevention and treatment of liver toxicity originated from acetaminophen comprising TNP (N2-(m-Trifluorobenzyl), N6-(p-nitrobenzyl)purine) as an active ingredient. The present inventors confirmed that TNP known as a 5-inosito pyrophosphate inhibitor suppressed apoptosis caused by acetaminophen in human embryonic stem cell-derived liver cells, mouse liver cells, and human hepatoma cell lines, up-regulated glutathione converted in liver cells, and inhibited JNK phosphorylation that is a kind of response against stress increased by acetaminophen. The inventors further confirmed that TNP had the activity of protecting liver cells from the toxicity caused by acetaminophen in an animal model. Therefore, TNP can be efficiently used as an active ingredient for a composition for the prevention and treatment of liver toxicity caused by acetaminophen.

7 Claims, 12 Drawing Sheets